Twin Cities Army Ammunition Plant NPL

Size: 2,370 acres
Mission: Modified caretaker; provide support to DoD tenants; formerly manufactured small-arms ammunition and projectile casings
HRS Score: 59.60; placed on NPL in September 1983
IAG Status: Federal Facility Agreement signed in August 1987
Contaminants: VOCs, PCBs, and heavy metals
Media Affected: Groundwater, surface water, sediment, and soil
Funding to Date: $113.2 million
Estimated Cost to Completion (Completion Year): $230.3 million (FY2080)
Final Remedy in Place or Response Complete Date for All Sites: FY2008

Arden Hills, Minnesota

Restoration Background

Since FY81, environmental studies verified that past waste disposal practices at this installation had released hazardous contaminants into soil, groundwater, and sediment, which migrated into the Minneapolis-St. Paul groundwater supply. Twenty-eight sites are grouped into three operable units (OUs), which include former landfills, burning and burial grounds, ammunition testing and disposal sites, industrial operations buildings, and sewer system discharge areas.

Ammunition-related metals, volatile organic compounds (VOCs), and polychlorinated biphenyls (PCBs) are the primary soil contaminants at the installation. Soil vapor extraction (SVE) systems have been installed to remove VOCs from soil. In 1989, the thermal treatment of 1,400 cubic yards of PCB-contaminated soil was completed.

VOCs are the primary contaminants in groundwater. From FY86 to FY93, groundwater extraction and treatment systems were installed. The installation constructed a Boundary Groundwater Recovery System to contain and treat VOC-contaminated groundwater at the installation's southwest boundary. The Army provided a permanent groundwater treatment system for the city of New Brighton, and the installation provided a municipal water supply hookup at the Lowry Grove Trailer Park.

In FY94, the OU3 Plume Groundwater Recovery System and the OU1 and OU3 municipal drinking water interconnection became operational. In addition, a boundary plume containment system was initiated to prevent off-post migration of VOCs in shallow groundwater. The installation established a technical review committee in 1985 and a Restoration Advisory Board (RAB) in FY96 to allow community input on cleanup decisions. Also in FY96, the installation continued work on the Outdoor Firing Range Phase III investigation and Engineering Evaluation and Cost Analysis (EE/CA), the Grenade Range EE/CA, and closure of Site F. The Water Tower Area site was closed, and a well advisory was implemented for OUs 1, 2, and 3.

In FY97, the Army implemented the alternate water supply plan, abandoning five residential wells. Five other wells were considered for alternate water supply or abandonment. For OU1, the installation installed two performance-monitoring wells. Upon completion of the OU2 Feasibility Study, the installation drafted the OU2 Record of Decision (ROD). The Army began Remedial Design (RD) for eight shallow soil sites and two deep soil sites and completed removal of all contaminated soil from Site F.

FY98 Restoration Progress

An installationwide ROD was signed, becoming the third and final ROD for the installation. This initiated the final cleanup at OU2, including construction and operation of a corrective action management unit. The Army completed RD for six sites and initiated RD for five sites; it began Remedial Action (RA) for two sites. The Army continued implementing the alternate water supply plan, abandoning one residential well. Seven other wells were considered for alternate water supply or abandonment. The RA (construction) for OU1 was completed; two additional containment wells and six additional performance monitoring wells were installed, which completed the remedy and satisfied the requirements of the OU1 ROD. The Army completed EE/CAs for the Outdoor Firing Range, the Grenade Range, and the VOC-contaminated soil at Site A. It initiated a Removal Action at the Outdoor Firing Range. A 2-year phytoremediation demonstration project, in conjunction with the U.S. Army Environmental Center (AEC), was initiated at two sites. Work continued on a tiered Ecological Risk Assessment (ERA) to evaluate the surface water and sediment for the entire installation. The Tier I ERA was completed and the Tier II investigation began.

Plan of Action

- Complete Tier II ERA in FY99
- Operate and maintain all RAs at OU1 and OU3 in FY99 and beyond
- Complete Site F closure report in FY99
- Complete RD for four sites and initiate RA for five sites at OU2 in FY99
- Complete RA for eight sites at OU2 in FY99
- Complete Remedial Investigation and EE/CAs for two primer tracer areas at OU2 from FY00 to FY02
- Complete all RAs by FY2003 under accelerated program

FY99 Funding by Phase and Relative Risk